

REMARKS

This Amendment responds to the Office Action mailed November 8, 2005 and follows the Interview with the Examiner on January 10, 2006. Applicants appreciate the Examiner's assistance during the Interview in reviewing the issues raised in the Office Action.

Claims 20-25 and 27-30 remain pending in this application. Claim 20 has been amended. Claims 1-19, 26 and 31-34 have been canceled. No claims have been added and no new matter has been added to the application.

No fee for additional claims is due by way of this Amendment. The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Objections to Specification

As suggested by the Examiner, Applicants have updated the "Cross-Reference to Related Applications" section and the Title. These amendments are found on page 2 of this Amendment.

Rejections Under 35 U.S.C. § 112, Paragraph 2

The Examiner rejected claims 20 and 26 under 35 U.S.C. § 112, Paragraph 2. Applicants have amended claim 20 to overcome this rejection and canceled claim 26. Accordingly, Applicants respectfully request that the Section 112 rejections be withdrawn.

Rejections Under 35 U.S.C. § 103

Pending claims 20, 22-25 and 27-30 stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 5,290,607 to Chitouras in view of U.S. Patent No. 3,798,048 to Brody et al. ("Brody"). Claim 21 stands rejected under 35 U.S.C. § 103 as being unpatentable over Chitouras in view of Brody, and further in view of U.S. Patent No. 4,899,411 to Johnson. Applicants respectfully submit that the pending claims are patentable over these cited references. A review of Chitouras and Brody is instructive in assessing patentability.

Chitouras (U.S. Patent No. 5,290,607). Chitouras discloses a method of manufacturing tennis balls (Figures 1 – 5) that involves stretching a substrate material prior to applying fibers to achieve a high density of fibers that he teaches is desirable. Specifically, Chitouras teaches that

the method of producing a substrate having high density of fibers embedded thereon includes the steps of: (1) applying adhesive to a substrate; (2) distending (*i.e.*, stretching or enlarging from external pressure) the surface area of the substrate just prior or during the application of fibers to the substrate; and (3) diminishing (*i.e.*, reducing) the surface of the substrate after the fibers are applied to decrease the space between fibers and thus significantly increase the density of fibers adhered to the substrate (column 4, lines 3-68).

While Chitouras suggests using his invention in environments other than tennis ball manufacturing, all his embodiments require a flexible substrate that is stretched prior to applying fibers. For example, in an embodiment designed for use with sheets of substrate material as illustrated in Figures 6 and 7, Chitouras teaches using a flexible and expandable polygon-shaped substrate 52 that is distended by applying a vacuum and using clamps to increase the surface area of at least a portion of the substrate (column 5, lines 35-68; and column 6, lines 1-15). In still another embodiment, Chitouras teaches that a resilient substrate 67 is coated by an appropriate flock adhesive and secured by clamps 68, 70 at opposite ends of substrate 67 (column 6, lines 16-21).

The Office Action cites Chitouras' discussion suggesting that his invention could be used to manufacture shoes with carpet-like outsoles (column 7, lines 47-68 and column 8 lines 1-25). Chitouras teaches using his invention, which requires stretch, the substrate prior to apply fibers, to achieve his goal of a high fiber density (*i.e.*, two or three times that which would otherwise be obtained). Chitouras does indicate which of his embodiments should be used to implement his suggestion – but neither is workable to create a fabric shoe outsole. If the shoe outsoles were cut to size and shape and then stretched to receive fibers (analogous to his tennis ball embodiment), the stretched and retracted outsole would not be usable for a shoe, where the size and shape of the outsole must be correct for the style and size being manufactured. Nor would Chitouras' sheet embodiment, in which a portion of a substrate sheet is stretched prior to flocking, offer a workable method of manufacturing shoe outsoles, as it would require individual outsoles pieces to be cut out of the stretched portions of the substrate sheet after the fibers had been applied it.

Brody (U.S. Patent No. 3,798,048). Brody describes a conventional method and apparatus for electrostatic flocking. Flocking material 12 is applied to an object by propelling

the particles through at least two electrically charged zones (Summary of the Invention at column 1, lines 43-49). Brody teaches that the object 14 is maintained on an upper surface of a conveyor belt 52 (column 3, lines 46-48). In addition, the belt is electrically grounded so as to ground the object (column 3, lines 49-50). The object is transported on the belt under the falling flocking material such that the flocking material adheres to the exposed surface of the object (column 3, lines 51-53). Brody does not disclose, teach, suggest, or provide any motivation for applying flocking material to a shoe outsole.

There Is No Suggestion or Motivation to Combine Chitouras and Brody

The Federal Circuit has held that evidence of a suggestion or motivation to combine references is needed to prevent the improper use of hindsight:

To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness. In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.

This court has identified three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art.

In re Rouffet, 149 F.3d 1350, 1357 (Fed Cir. 1998).

There is no suggestion or motivation to combine Chitouras and Brody and Applicants' therefore submit that the rejections under Section 103 should be withdrawn. Chitouras stretches the substrate material before flocking and releases it after to obtain high fiber density, and teaches that this is the key to his invention. Chitouras' invention is one that persons skilled in the shoe art specifically would *not* use with shoe outsoles because maintaining an accurate outsole shape and size is critical to manufacturing quality. Stretching, flocking and releasing the outsole as taught by Chitouras (assuming it were even possible) would ruin the quality of the shoe. Further, the materials typically used for shoe outsoles are not stretchable in the manner envisioned by Chitouras (see, e.g., specification p. 4, lines 1 - 4). Brody discloses a

conventional flocking but does not disclose, teach or suggest his process be used for shoe outsoles.

None of the three tests for combining reference under *Rouffet* are met here. Neither the nature of the problem to be solved, the teachings of the prior art, nor the knowledge of persons of ordinary skill in the art offer any suggestion or motivation to combine the cited references. Applicants' invention provides an inexpensive way to manufacture fabric outsoles without requiring special molds or procedures (Specification p. 2, lines 12-14). Nothing about the nature of this problem suggests looking to Chitouras (which teaches stretching the substrate and the need for high density fibers) or Brody (which gives no indication it could be useful for this process), let alone to combine these two references.

Nor do the teaching of the prior art point persons in the art to either of these references or offer suggestions or motivations to combine them. U.S. Patent No. 6,430,844 to Otis seeks to solve the same problem as Applicants but uses special molds and processes to create a fabric outsole. Chitouras, to the extent it is properly considered part of the prior art, teaches that conventional flocking does not work for outsoles, and proposes stretching the outsole to obtain the high fabric density he believed was required (which, as discussed above is unworkable if applied to outsoles).

Finally, the knowledge of persons of skill in the art does not teach or suggest combining these references. Persons of skill in the art would see Chitouras as unworkable and would see no reason to think Brody could be used in the context of shoe outsoles.

Even If Combined, Chitouras and Brody Do Not Render Applicants' Invention Obvious

Even assuming *arguendo* that Chitouras and Brody can be properly combined, the combination does not render Applicants' claimed invention obvious. Looking to Applicants' invention as recited in claim 20, it claims applying adhesive to a shoe outsole, placing the outsole on a support plate, providing a screen above the support plate and drawing a plurality of fibers through an electro-static field and through the screen to embed fibers into the adhesive on the outsole.

Chitouras teaches away from this invention, teaching that the substrate material must be stretched, flocked and returned to its original size. Thus, combining Chitouras with Brody would

yield, for example, a process where a piston comes from below the Brody conveyor belt to expand the surface area of the shoe outsole (see Chitouras Figure 7 and column 5, line 58 – column 6, line 15).


Conclusion

Overall, the cited references do not singly, or in any motivated combination, teach or suggest the claimed features of the embodiments recited in independent claim 20, and thus claim 20 is allowable. Because remaining claims 21-25 and 27-30 depend from the allowable independent claim 20 and include additional limitations, they are likewise allowable. See, *e.g.*, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Thus, Applicants respectfully request that the Section 103 rejections be withdrawn. With this withdrawal and in light of the amendments made herein, favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

SEED Intellectual Property Law Group PLLC



William O. Ferrell, Jr.
Registration No. 30,633

Enclosure:

Postcard

701 Fifth Avenue, Suite 6300
Seattle, Washington 98104-7092
Phone: (206) 622-4900
Fax: (206) 682-6031

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